

Notice of Allowability

Application No.

10/613,784

Examiner

Jonathan S. Crepeau

Applicant(s)

OHLSEN, LEROY J.

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to preliminary amendment of 8/19/04.
2. ☒ The allowed claim(s) is/are 66-74.
3. ☒ The drawings filed on 07 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Thomas Loop on October 14, 2004.

The application has been amended as follows:

IN THE CLAIMS:

Amend claims 66 and 69 as follows:

66. (currently amended) An electrode ~~adapted for use with a fuel cell~~, comprising:
a support structure derived from a silicon substrate, wherein the support structure has a plurality of porous regions that define pore surfaces, and wherein the pore surfaces have a catalyst dispersed thereon such that the catalyst is ~~noneontigously~~ dispersed throughout the plurality of porous regions.

69. (currently amended) An electrode ~~adapted for use with a fuel cell~~, comprising:
a support structure derived from a silicon substrate, wherein the support structure has a plurality of parallel pores that extend through the support structure, and wherein the plurality of parallel pores define pore surfaces, and wherein at least a portion of the pore surfaces carries a catalyst thereon, and wherein the plurality of parallel pores are random.

Cancel claims 75 and 76.

Terminal Disclaimer

3. The terminal disclaimer filed on October 12, 2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,641,948 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

4. Claims 66-74 are allowed.

5. The following is an examiner's statement of reasons for allowance:

DE 19820756 is the closest prior art to independent claim 66; however, this reference has been antedated by the declaration under 37 CFR 1.131 filed in the parent application (09/715,830). As such, claim 66 is allowable.

Independent claim 69 recites, among other features, that the silicon substrate comprises a plurality of parallel pores that are randomly oriented. Lehmann et al (U.S. Patent No. 5,262,021), the closest prior art, discloses a silicon substrate comprising a plurality of parallel pores. However, the reference does not teach or fairly suggest that the pores should be random, because the reference teaches that a number of advantages arise from the *regular* order of the pores (see col. 2, line 65 et seq.). As such, claim 69 is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

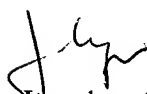
Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: DE 19757320 (discloses etching to create an open porosity in a silicon electrode substrate).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jonathan Crepeau
Primary Examiner
Art Unit 1746
October 20, 2004